

Notice of Allowability

Application No.

10/768,753

Examiner

Daniel Swerdlow

Applicant(s)

GOPALAN ET AL.

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2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed 21 January 2004.
2. ☐ The allowed claim(s) is/are 1-14.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance:
2. Regarding Claim 1, US Patent 4,225,967 to Miwa et al. discloses a system for inserting digital information into a sound signal (Fig. 7a) by controllably inserting a pilot tone signal F_p and data tone signals F_1 , F_2 (column 9, lines 34-43) based on a measurement of the signal level of the sound signal (column 3, lines 53-60). However, Miwa does not disclose embedding a "0" by setting a first tone power at a percentage of the sound signal power and a second tone power as a fraction of the first tone power and otherwise setting the second tone power at a percentage of the sound signal power and the first tone power as a fraction of the second tone power, as claimed. US Patent 3,845,391 to Crosby discloses a similar arrangement (Fig. 1A) that increases an amplitude of an embedded data signal as a function of the program audio level (column 5, lines 38-53) to maintain a data signal level 40 to 55 dB below (i.e., at a percentage of) the program audio level. However, Crosby does not disclose embedding a "0" by setting a first tone power at a percentage of the sound signal power and a second tone power as a fraction of the first tone power and otherwise setting the second tone power at a percentage of the sound signal power and the first tone power as a fraction of the second tone power, as claimed. US Patent 5,450,490 to Jensen et al. discloses an apparatus for including imperceptible codes with audio signals (Fig. 2; column 2, lines 3-7) based on evaluation of the masking properties of the audio signal at a plurality of tone frequencies (column 6, lines 59-63). However, Jensen does not disclose embedding a "0" by setting a first tone power at a percentage of the sound signal power and a second tone power as a fraction of the first tone power and otherwise setting the second tone power at a percentage of the sound signal power and the first tone power as a fraction of the

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second tone power, as claimed. Because the prior art does not disclose all elements of the claimed invention, the claim is allowable.

3. Claims 2 through 6 are allowable due to dependence from Claim 1.
4. Claim 7 includes all elements of Claim 1 and is allowable for the same reasons.
5. Claims 8 through 14 are allowable due to dependence from Claim 7.

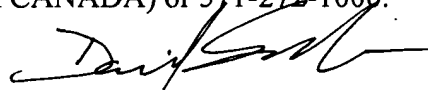
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Swerdlow whose telephone number is 571-272-7531. The examiner can normally be reached on Monday through Friday between 7:30 AM and 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh H. Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Daniel Swerdlow
Primary Examiner
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12 April 2007